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		EXAMINER INTERVIEW SUMMARY R		* .
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Paul Sch	una (AH)	(3)	<u> </u>	
2) Clonard A	. Leo LExa	miner) (4)		
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Attorney Docket: 027/43042

PATENT

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: HERBERT DAMSOHN ET AL.

Serial No.: 08/743,002 Group Art Unit: 3743

Filed: NOVEMBER 1, 1996 Examiner: L. LEO

Title: HEAT EXCHANGER FOR EXHAUST GAS COOLING

## PROPOSED AMENDMENT FOR PURPOSES OF INTERVIEW DISCUSSION ONLY

1. (Amended) A heat exchanger for cooling exhaust gas of an internal-combustion engine, comprising:

a plurality of rectangular tubes for guiding exhaust gas;

a plurality of lugs arranged in pairs in said rectangular tubes diagonally to a flow direction of the exhaust gas;

latticed tube bottoms [in] <u>to</u> which ends of said rectangular tubes are [arranged] <u>welded</u> such that said rectangular tubes form a bundle;

a sheet metal jacket arranged around said bundle and attached to said tube bottoms, said sheet metal jacket being provided with a coolant inlet and a coolant outlet to allow a liquid coolant to flow around said rectangular tubes in said sheet metal jacket; and

[flange plates] <u>connections</u> attached to ends of said sheet metal jacket and configured for attachment to an exhaust pipe, each said flange plate defining a central opening which communicates said rectangular tubes with the exhaust pipe.

20. (Amended) A heat exchanger for cooling exhaust gas of an internal-combustion engine, comprising:

a plurality of tubes for guiding exhaust gas;

first and second latticed tube bottoms, each tube bottom defining a plurality of openings corresponding to an outer periphery of respective of said tubes, first and second axial ends of each of said tubes being arranged in <u>and welded to</u> respective of said openings in said first and second tube bottoms such that said tube bottoms support said tubes substantially

parallel to one another and spaced-apart from one another in a bundle;

a sheet metal jacket concentrically surrounding said bundle and attached to said tube bottoms, said sheet metal jacket and said tube bottoms defining a chamber, said sheet metal jacket being provided with a coolant inlet and a coolant outlet to allow a liquid coolant to enter said chamber, flow around an exterior surface of said tubes in said chamber, and exit said chamber; and

[flange plates] <u>connections</u> attached to ends of said sheet metal jacket and configured for attachment to an exhaust pipe, each said flange plate defining an opening which communicates an interior of said tubes with an interior of said exhaust pipe.

22. (Amended) A method of manufacturing a heat exchanger for cooling exhaust gas of an internal-combustion engine, said method comprising the steps of:

providing a plurality of rectangular tubes for guiding exhaust gas;

attaching a plurality of lugs to said rectangular tubes diagonally to a flow direction of the exhaust gas, said lugs being arranged in pairs;

providing first and second latticed tube bottoms, each tube bottom defining a plurality of openings corresponding to an outer periphery of respective ones of said tubes,

[attaching] welding ends of said rectangular tubes to said latticed tube bottoms such that said rectangular tubes form a bundle:

attaching a sheet metal jacket to said tube bottoms and around said bundle;

providing said sheet metal jacket with a coolant inlet and a coolant outlet to allow a liquid coolant to flow around said rectangular tubes in said sheet metal jacket; and

attaching [flange plates] <u>connections</u> to ends of said sheet metal jacket, said flange plates being configured for attachment to an exhaust pipe, each said flange plate defining a central opening which communicates said rectangular tubes with the exhaust pipe.